

Appl. No.: 10/798,164
Amendment Dated: November 14, 2007
Reply to Office Action of August 22, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. **(Cancelled)**
2. **(Currently Amended)** The surfactant composition of claim 5254, characterized in that the surfactant composition comprises
 - (A) 5 to 60 wt%, referring to components (A) and (B), of said one or more gemini surfactant(s) and,
 - (B) referring to the remainder 95 to 40 wt.%, based on the total of components (A) and (B), of said co-amphiphile(s).
3. **(Currently Amended)** The surfactant composition according to any of claims 2 or 5254, further comprising
 - (C) at least 0.1 wt% water, referring to the total composition.
4. **(Currently Amended)** A surfactant composition according to any of claims 2 or 5254, further comprising
 - (D) at least 0.1 wt% of one or more oil component(s), referring to the total composition.

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5. **(Cancelled)**
6. **(Currently Amended)** A surfactant composition according to any of claims 2 or 5254 in the form of an emulsion, characterized in that the co-amphiphiles are present in solid form at 25°C.
7. **(Currently Amended)** A surfactant composition according to any of claims 2 or 5254 in the form of a dispersion, characterized in that the co-amphiphiles are present in liquid form at 25°C.
8. **(Cancelled)**
9. **(Currently Amended)** A surfactant composition according to any of claims 2 or 5254, wherein the two co-amphiphiles are
 - a C₆- to C₄₀- alcohol, and
 - a mono-, di-, and triglyceride of C₆- to C₂₂-carboxylic acid.
10. **(Previously Presented)** A surfactant composition according to claim 9, characterized in that the surfactant composition comprises
 - 30 to 50 wt% of C₆- to C₄₀- alcohol, and

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- 30 to 50 wt% of a mono-, di-, and triglyceride of a C₆- to C₂₂-carboxylic acid

each referring to the gemini surfactant/co-amphiphile(s) composition.

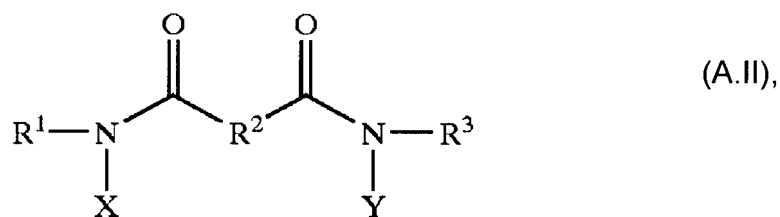
11. **(Currently Amended)** A surfactant composition according to any of claims 2 or 5254 in the form of an emulsion, characterized in that the surfactant composition can be produced by a ~~method~~-(phase transfer temperature (PTT) method[[]]), which includes at least the following step:
combining
 - (a) a composition (a) comprising the gemini surfactant (A) wherein the composition has a temperature X, with
 - (b) a composition (b) comprising the co-amphiphile (B) wherein the composition has a temperature Y,the temperature Y being greater than temperature X.
12. **(Original)** The surfactant composition of claim 11, characterized in that the temperature Y is not more than 15°C higher than the critical phase transfer temperature of the surfactant in composition (b).
13. **(Original)** Surfactant compositions according to claim 12, characterized in that the temperatures X and Y are different by at least 3°C.

14-16. **(Cancelled)**

17. **(Currently Amended)** A surfactant composition according to any of claims 2 or ~~5251~~, characterized in that the surfactant composition comprises 0.01 to 30 wt% of the components (A) and (B), referring to the total composition.

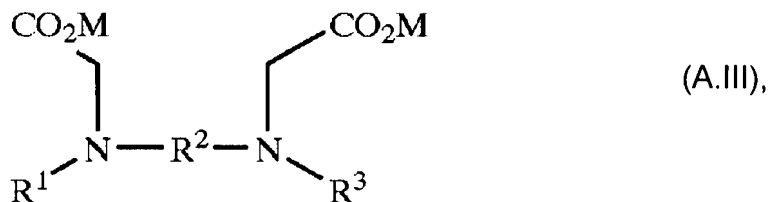
18. **(Cancelled)**

19. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (A.II).



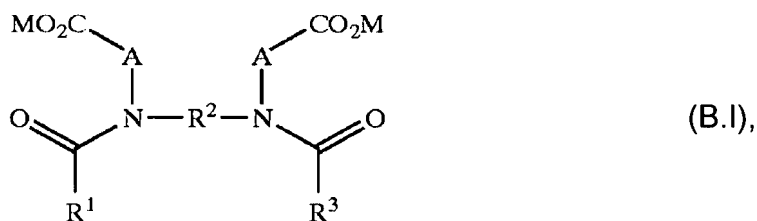
wherein the substituents have the meanings as defined by the general formula (A.I).

20. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (A.III).



wherein the substituents have the meanings as defined by the general formula (A.I).

21. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (B.1).

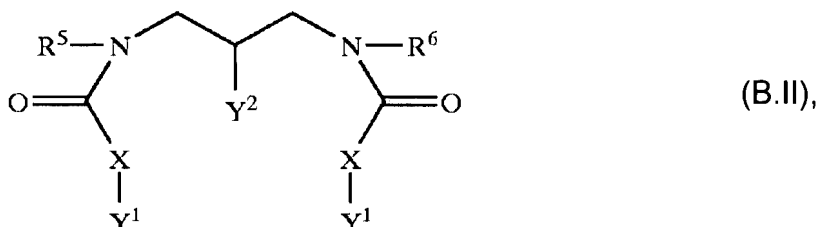


wherein the substituents have the following meanings:

- R^1, R^3 C_5 - to C_{25} -alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated;
- R^2 $\text{C}_1[[.]]$ - to C_{12} -alkylene
- A CHR^4 , CH_2 , C_2H_4 , C_3H_6 , C_4H_8 ;
- R^4 aminocarboxylic acid radical, and

M alkali, (alkyl)ammonium, alkanol ammonium, H, or 1/2
alkaline earth.

22. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50,
characterized in that the gemini surfactant has the general formula (B.II).



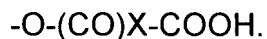
wherein the substituents have the meanings as defined by the general
formula (B.I), and

R⁵, R⁶ represent a C₆- to C₃₆-alkyl group that can be branched,
unbranched, saturated, or unsaturated as far as not adjacently
diunsaturated;

X is an alkylene- or alkenylene group having from 1 to 6 carbon
atoms, which may be substituted with a hydroxyl group or a sulfonic
acid group or a carboxyl group;

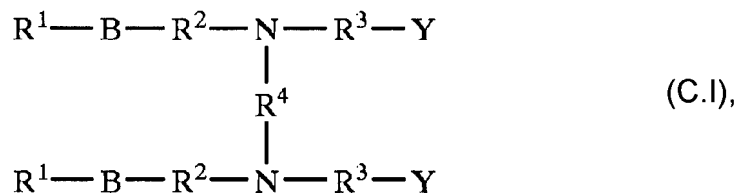
Y¹ is a sulfonate- or sulfate group or a
carboxyl group, and

Y² represents a hydroxyl group, a sulfuric acid residue, or



23-24. (Cancelled)

25. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (C.I).

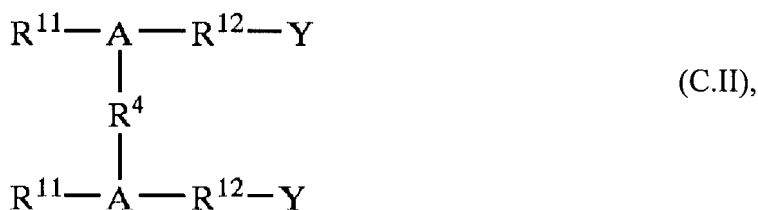


wherein the substituents have the following meanings:

- R^1 C_5 - to C_{25} -alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated, hydroxy-substituted or perfluorinated;
- R^2 C_1 - to C_{12} -alkylene or hydroxy-substituted derivatives thereof;
- B an amide group, a carboxyl group, or a polyether group;
- R^5 C_1 - to C_4 -alkyl, hydroxy-substituted alkyl, or H;
- R^6 C_2 - to C_4 -alkylene;
- x a number from 1 to 20;
- R^3 C_1 - to C_{12} -alkyl or hydroxy-substituted derivatives thereof, R^7 -D- R^7 , or a polyether group;
- R^7 C_1 - to C_6 -alkylene or hydroxy-substituted derivatives thereof;
- D -O-, -S-, -N(R^8)-;
- R^4 alkylene or alkylaryl having from 1 to 12 carbon atoms, the

- hydroxy-substituted derivatives, or $R^9-D^1-R^9$;
- R^8 C_1 - to C_{12} -alkyl or hydroxy-substituted alkyl, H, or $R^9-D^1-R^9$;
- R^9 C_1 - to C_6 -alkylene, hydroxy-substituted derivatives thereof, or aryl;
- D^1 -O-, -S-, -SO₂-, -C(O)-, [-O(R⁷-O)_x-], (R¹⁰)_t[N(R¹⁰)]_z, or aryl;
- R^{10} C_1 - to C_{12} -alkyl, hydroxy-substituted alkyl, H, or aryl;
- t, z are independently a number from 1 to 4; and
- Y is independently -SO₃H, -O-SO₃H, -OP(O)(OH)₂, -P(O)(OH)₂, -COOH, -CO₂-C₆H₄-SO₃H, or the salts thereof.

26. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (C.II).



wherein the substituents have the meanings as

defined by the general formula (C.I), and

- R^{11} is a C_5 - to C_{23} -alkyl group that can be branched, unbranched, saturated, unsaturated as far as not adjacently diunsaturated, hydroxy-substituted, or perfluorinated or $R^{14}-B-R^2$;
- R^{14} is a C_1 - to C_{12} -alkyl group that can be branched, unbranched, saturated, unsaturated as far as not adjacently diunsaturated, or the hydroxy-substituted derivatives;

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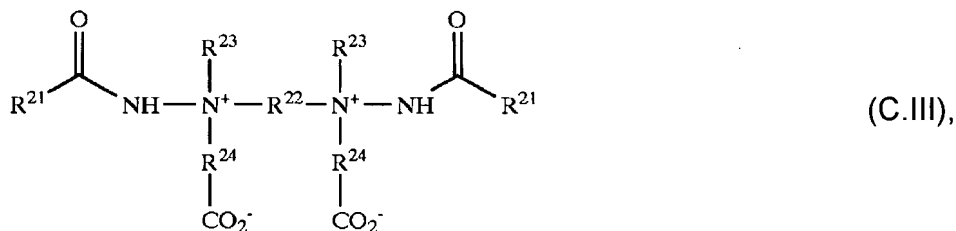
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R^{12} means a C_1 - to C_{12} -alkylene group that can be branched, unbranched, saturated, unsaturated as far as not adjacently diunsaturated, the hydroxy-substituted derivatives, or an amide group, a carboxyl group, a polyether group; and

A is $-CR^6=$ or $-N=$, if whenever A is equal to $-N=$, R^{11} represents $R^{14}-B-R^2$.

27. **(Withdrawn)** A surfactant composition according to any of claims 2 or 50, characterized in that the gemini surfactant has the general formula (C.III).



wherein the substituents have the meanings as defined by the general formulas (C.I) and (C.II) and

R^{21} represents a C^5 - to C^{23} -alkyl group that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated;

R^{22} , R^{24} are C_1 - to C_6 -alkylene;

R^{23} is methyl, ethyl, propyl, or a polyether group.

- 28-31. **(Cancelled)**

32. **(Currently Amended)** The surfactant composition any of claims 2 or 5254 wherein said ~~one or more~~ gemini surfactants ~~are~~ is present in an amount

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of from 10 to 60 wt%.

33. **(Currently Amended)** The surfactant composition any of claims 2 or 5254 wherein said ~~one or more~~ gemini surfactants ~~are~~ is present in an amount of from 10 to 50 wt%.
34. **(Currently Amended)** The surfactant composition any of claims 2 or 5254 wherein said long chain alcohol is a C₈- to C₂₄- alcohol.
35. **(Currently Amended)** The surfactant composition of claims 2 or 5254 wherein said carboxylic acid is a C₈- to C₂₂-carboxylic acid.
36. **(Currently Amended)** The surfactant composition of claims 2 or 5254 wherein 3 to 5 different co-amphiphiles are employed.
37. **(Previously Presented)** The surfactant composition of claim 9 wherein said long chain alcohol is a C₈- to C₂₄-alcohol.
38. **(Previously Presented)** The surfactant composition of claim 10 wherein said long chain alcohol is a C₈- to C₂₄- alcohol.
39. **(Original)** The surfactant composition of claim 11 wherein said composition (a) contains water.
40. **(Original)** The surfactant composition of claim 11 wherein said composition (b) contains an oil component.
41. **(Previously Presented)** The surfactant composition of claim 13 wherein

the temperatures X and Y are different by at least 5° C.

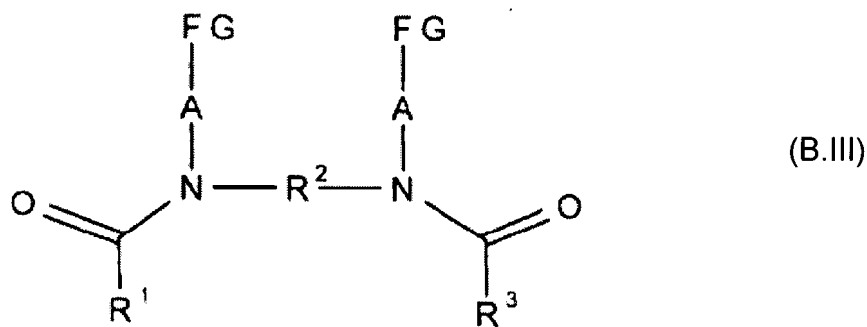
42. **(Original)** The surfactant composition of claim 17 wherein the surfactant composition comprises 0.1 to 6 wt% of the components (A) and (B), referring to the total composition.

43-51. **(Cancelled)**

52. **(Previously Presented)** A surfactant composition comprising
- (A) 1 to 70 wt% referring to components (A) and (B), of one or more gemini surfactant(s) and,
- (B) referring to the remainder, based on the total of components (A) and (B), two or more co-amphiphile(s) having an HLB value of less than or equal to 6;

wherein

- at least one gemini surfactant has the general formula (B.III)



wherein the substituents have the following meaning

FG is -COOM or -SO₃M;

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R^1, R^3 is C_5 - to C_{25} -alkyl, that can be branched, unbranched, saturated, or unsaturated as far as not adjacently diunsaturated;

R^2 is C_1 - to C_{12} -alkylene;

A is CH_2 , C_2H_4 , C_3H_6 , C_4H_8 ; and

M is alkali, (alkyl)ammonium, alkanol ammonium, H, or $\frac{1}{2}$ alkaline earth;

and wherein

- the co-amphiphile(s) having an HLB value of less than or equal to 6 comprise a mixture of at least two different co-amphiphiles selected from at least two different groups (a) to (d):

- (a) one long chain alcohol(s) being C_6 - to C_{40} - alcohol(s);
- (b) long chain acid(s) being C_6 - to C_{24} - carboxylic acid(s);
- (c) ester(s)/partial ester(s) of a polyol with one or more mono- or polycarboxylic acid(s) selected from the group consisting of:
 - a sorbitan (C_6 - to C_{22} -) ester,
 - a methylglucoside (C_6 - to C_{22} -) ester,
 - a sugar (C_6 - to C_{22} -) ester,
 - a mono-, di-, and triglyceride of a C_6 - to C_{22} - carboxylic acid,
 - a lactic acid or citric acid esterified derivative of a mono- or di-glyceride of a C_6 - to C_{22} -carboxylic acid,
 - a polyglycerol (C_6 - to C_{22} -) ester, and
 - a vitamin ester;

and

- (d)
 - salicylic acid
 - benzoic acid
 - lecithin